

SITE NUMBER: B-R8-04
LOCAL NAME: Bogachiel Pit Pond
WRIA: 20.0248D

NORTH COAST OFF CHANNEL SITE INVENTORY DATA

RIVER SYSTEM: Bogachiel **DATE:** 8/3/89 **OBSERVER:** Young

CHANNEL TYPE: A large gravel pit pond and its egress channel.

TRIBUTARY TO: B-R8-03 (A side channel of the Bogachiel).

SITE LOCATION: R.B. of the Bogachiel @ River mile - 19.5 (WDF)

LEGAL DESCRIPTION:

	UPPER END	LOWER END	RIVER TEMP
<u>WATER TEMP:</u>	14 C	19 - 20 C	14 C
<u>FLOW (CFS):</u>	0.25	Dry	

SUBSTRATE: Egress is mostly gravel and cobble. Pond has a thin layer of silt over gravel and cobble.

SITE SIZE: **Length-** Pond = 300 m. Egress = 95 m
 Width- Pond = 45 m avg. Egress = 6 - 8 ft
 Depth- Pond = > 3 ft. Egress = Presently dry.
Note: Pond length & width are from Warren Scarlett (DNR, 1984)

WATER SOURCE: Appears to be fed primarily by two small to medium range valley wall tribs entering the pond from the steep right bank.

DIRECTIONS TO SITE: Heading north on Hwy 101, turn right at mile post 186 (i.e. just north of the Bogachiel bridge and directly across from Bogachiel State Park) onto Undie Rd. Continue east approximately 4.2 miles on Undie Rd. until it crosses the B-R8-04 egress channel. The large, open pond can be seen just north and east of the road.

FISH ACCESS AND CURRENT USE: At the time of this survey there was no fish access to B-R8-04 since the egress was dry. However, water does appear to flow out the egress throughout most of the Fall, Winter and early Spring. The pond appears to stay watered year round. Juvenile salmonids were present in the pond. 0+ coho were quite abundant in the lower reaches of the east end tributary. Adult coho are known to spawn in the lower end of this trib (i.e. upstream of the pond). A beaver dam at the pond outlet may greatly restrict fish access.

FLOODING POTENTIAL: Low.

LANDOWNER: Unknown at this time.

COMMENTS & RECOMMENDATIONS: More than 95% of the habitat in B-R8-04 is found in the large, open gravel pit pond. In January 1984, Warren Scarlett (DNR) determined the winter surface area of the pond to be 13,650 sq. meters (3.37 acres). Maximum winter water depth appears to be in excess of 2 meters with average winter depths probably between 1 and 2 meters. The pond seems to lack cover. No significant LOD was seen. Overhanging brush along the perimeter of the pond and marsh grass in the small shallows at the east end provide minimal cover.

B-R8-04 appears to receive its water primarily from two, small to medium sized, right bank, valley wall tribs. Both enter from off the steep, recently logged hillside to the north of the pond and both appear to flow year round.

The larger of the two tribs enters at the east end of the pond. Adult coho are known to spawn in the lower 50 to 100 m of this trib (i.e. between the pond and the toe of the hill). At the time of this survey, coho fry

were quite abundant in this lower reach of the trib.

The smaller valley wall trib enters at the west end of the pond (i.e. near the outlet). It enters the pond at a steep gradient and does not appear to provide any significant fish habitat.

A well built, medium-sized beaver dam is found at the outlet of the pond (i.e. the head of the egress channel). This dam has been a chronic problem throughout the upstream and downstream migration periods and appears to greatly restrict fish passage.

25 to 30 m downstream of the pond's outlet, B-R8-04 flows through a large culvert beneath Undie Rd. This CMP culvert is 6 ft in diameter and 48 ft long. The plunge at the downstream end appears negligible. Below Undie Rd the egress channel is some 6 to 10 ft wide and deeply incised (6 to 8 ft vertical banks). The substrate is mostly large gravel and cobble. Though dry at the time of this survey, it appears that water in the channel may at times attain a rather high velocity. 65 m downstream of the Undie Rd culvert B-R8-04 converges with an active side channel of the Bogachiel River (see B-R8-03). The two channels meet at a 90 degree angle. Cobble and gravel from the mouth of B-R8-04 extends out into the side channel forming a small delta. It is about 260 m from the mouth of B-R8-04 to the mouth of the side channel with no significant restrictions to fish passage. An excellent back eddy occurs at the mouth of the side channel (see B-R8-03).

The pond in B-R8-04 has been smolt trapped in the past by DNR biologists. A summary of the catch data has been requested. May desire further evaluation of present coho utilization and further monitoring of flows throughout the Fall, Winter and Spring. Possible habitat enhancements might include installation of controls along the egress channel and some means to provide fish passage at the beaver dam. Other than the depth of its water, the pond appears to be greatly lacking in cover. The addition of root wads and other LOD throughout the pond could be very beneficial.

GPS: (decimal degrees, Datum WGS84):

N47.87481, W124.30392 - pond outlet

DATE: 8/24/89

Received a memo from Warren Scarlett summarizing DNR's juvenile coho trapping data for this site. The results reported were as follows:

Year	In	Fk Lgth	Out	Fk Lgth
1984-85	1124	85.4	324	130.2
1985-86 *	30000	57.3	321	
1985-86	643	77.6	86	126.2

* Planted.

Juvenile coho immigrants were freeze branded in the Fall of both years in order to determine overwinter survival. Warren reports an 11.8 % and 10.8 % survival rate for the years 1984-85 and 1985-86 respectively. 30000 tagged fry from the Sol Duc Hatchery were planted in the summer of 1985. The fry to smolt survival rate of these fish was estimated at 1.1%.

Attached is a copy of Warren's memo for inclusion in our hard data files.

DATE: 7/5 - 10/6/92

OBSERVER: King, Nettnin

The construction crew installed five log controls in the out let to allow for fish passage over the existing beaver dam. Stumps were hauled in and during low water conditions were placed in the pond with an excavator. The stumps were then anchored with cement weights that were built for the project. In order to gain more cover conifer crowns from a nearby precommercial thinning unit were hauled in and distributed throughout the pond. The tops were anchored using rocks that were drilled, with a length of cable epoxied into the hole. About four tops were tied together with an anchor before placement. Crew days: 7 (crew days based on a 10 man crew working 8 hrs/day).

MATERIAL LIST

HARDWARE	staples, 3 in	50
	" 2 in	5 lbs
	3/8 cable	350/ ft
	Hilti epoxy	11 tubes
	concrete anchors	48
	grass seed	1/4 bag

DATE: Fall/Winter 1992/93

OBSERVER: King

The project was checked several times during this period and the project functioned fairly well. The outlet dried up a couple of times and the beaver continued to build on the dam above the upper control. For the most part, the B-dam was passable to upstream migrating fish. Ron Darrow removed parts of the dam as needed. High flows on the left bank side caused some erosion on the end of the upper log.

DATE: 4/7/93

OBSERVER: King

Upper 4 logs have flow through notches. Lower log is dry. Pool below culvert is full. Need to modify notches to make them more passable.

DATE: 5/13/93

OBSERVER: King

Hasn't rained for 4 days. Lots of coho fry around beaver dam and in pools below controls. Still has good flow. Saw larger salmonids jumping in pond.

DATE: 5/19/93

OBSERVER: King

Still flowing over upper 4 controls. Appears that the lower log control is missing filter fabric.

DATE: 5/28/93

OBSERVER: King

Flow still spilling at upper 4 logs. Lowermost log above culvert was spilling but flow was going subsurface below that. Lots of coho fry between controls need to be removed before the pools dry up. Notified Ron Darrow about netting or shocking these out.

DATE: 12/8/93

Good flow! Beaver dam is passable.

DATE: 12/29/93

Outlet is not flowing. Has not rained for 2 weeks. Beaver dam is beginning to rise in height. One adult coho seen in pond above beaver dam.

DATE: 4/28/94

OBSERVER: Nettnin

It was observed that the lower weir below the road was leaking, thus preventing fry from moving up if they wanted to. Fry were observed to be in the pool below the culvert. These were probably lost due to stranding in late summer.

DATE: 10/94

OBSERVER: Nettnin

The lower weir was repaired. It was found that the filter fabric had gotten pulled away on the RB side leaving a gap between the logs. New fabric was laid in place and backfilled.

During past high waters or due to fishers dragging the cover structures out of the pond a number of cover structures needed to be replaced.

Trees that had been thinned from near by plantations were collected and hauled to the pond. They were then tied three or four to the bundle, a weight tied to them with a length of cable and then distributed to the open areas of the pond.

The area near the outlet is left open to allow for fishing.

DATE: 10/26/94

OBSERVER: King

Good flow. Everything looks good. No fish seen.

DATE: 3/16/95

OBSERVER: Darrow

Ongoing beaver dam at outlet. During freshets, there appears to be enough water escaping around left bank side and over dam to allow fish passage. This dam is periodically checked on and debris removal is done during migration periods. Observed some surface activity on upper end of pond.

DATE: 10/23/95

OBSERVER: King, Powell

Pond still has active beaver dam at confluence of pond and channel. It is not a fish blockage problem during higher flows, but needs to be open periodically during migration times. Dam has been opened twice this season and will be routinely checked.

DATE: 4/9/96

OBSERVER: Powell

Beaver activity continues resulting in a large amount of debris piled on both sides. Due to the size of the piles, a maximum 3 foot wide clearing can be made. Some of the willow sticks have taken root in the piles and it is suggested that these mounds be removed. We will try a barrier fence here once the stumps (for in pond placement) are moved. The road has washed out below this site and presently, this area has to be walked in to.

DATE: 11/15/96

OBSERVER: Powell

Beaver used barrier fence to build dam against (barrier fence was erected when that area of the pond was dry - beaver was able to build as flows came up). Dam is not passable but water does flow around the LB side where there is presently a large stump (which will be placed in the pond next summer). I cleared beaver debris in this area. Juveniles can pass through this small area but it is doubtful if adults can. There was also a dam on log control below the culvert; the debris was removed.

DATE: 3/17/97

OBSERVER: Darrow

Beaver dam is active. There is not a juvenile problem at present flows - water flows around left bank by root wad. During high flows, water channels west of pond outlet and spills down bank into egress channel at ~ 1.5-2 m upstream of large culvert. Willows and alders along shore are increasing in numbers. The road into site has not been repaired.

DATE: 8/12/97

OBSERVER: Nettnin

Removed beaver debris and fence wire above the upper weir.

DATE: 9/19/97

OBSERVER: Nettnin

Project inspected; small amount of beaver activity, looks OK.

DATE: 3/17/98

OBSERVER: Darrow

Road to site is being repaired. Beaver activity is as usual. Made some openings in the beaver dam and cleared area around root wad on left bank so there is flow around the dam. Sporadic rises on pond were observed.

DATE: 1/20/99

OBSERVER: Darrow

Controls above and below the culvert are clear of debris. No recent beaver activity and dam area is not a barrier; water is flowing under and around the rootwad on the left banks side. Observed some rises on the pond.

DATE: 4/25/99

OBSERVER: Darrow

Beaver dam intact but porous enough to pass fish. Culvert and controls were relatively clear of debris. Observed fry below culvert, above and below pond outlet.

DATE: 10/6/99

OBSERVER: Darrow

Pond is still low and not flowing yet. Left side of beaver dam is open at this time.

DATE: 4/9/00

OBSERVER: Darrow

The outflow from the pond was good but the beaver dam restricted it. Opened a section of the dam and will continue to monitor this site during the down migration. Rises were observed on the pond.

DATE: 10/22/00

OBSERVER: Darrow

Pond level has increased dramatically since September. Typical beaver dam at left bank outlet. The dam was porous and negotiable for immigrants. Numerous rises were observed across the pond surface. This site requires routine beaver activity check.

DATE: 2/24/01

OBSERVER: Darrow

Beaver dam was partially breached and passable. Salmon Coalition placed coho carcasses in this system this fall; remnants were still noticeable. Record low precipitation this winter and early spring. Log control downstream of the culvert does not have water flowing over it. The water is filtering through the gravel and emerging under/below it.

DATE: 10/17/01

OBSERVER: Darrow

Outflow is presently low. Beaver dam in usual place and it was breached. The control downstream of the culvert is leaking. At this time, all the water is seeping through the gravel and cloth apron. It will flow over the control with more volume of water. The pond could benefit from some more woody debris cover structures. Some surface rising on the pond.

DATE: 12/4/01

OBSERVER: Darrow

The Pacific Coast Salmon Coalition distributed about a tote of salmon carcasses for nutrient enrichment.

DATE: 4/1/02

OBSERVER: Nettnin

Lower control is leaking on the right bank end. Active beaver dam at the pond outlet.

DATE: 10/10/02

OBSERVER: King

The egress is dry. Observed juvenile fish in the pond.

DATE: 11/14/02

OBSERVER: King

Water is now flow through project. Opened beaver dam at the pond outlet. Good egress to the river.

GPS: (decimal degrees, Datum WGS84):

N47.87481, W124.30392 - pond outlet

DATE: 11/27/02

OBSERVER: Nettnin

The status of this project is the same as in the spring. There are additional problems with the log weirs above the road. They will be scheduled for repair in the summer of 03 or beyond.

DATE: 12/13/02

OBSERVER: Powell

Opened the beaver dam. Adult coho and steelhead were observed in the pond and in the channel downstream.

DATE: 5/8/03

OBSERVER: King

Opened a hole in the beaver dam at the pond outlet. Fish rising in the pond. The control is blown out under the right side.

DATE: 9/2/03

OBSERVER: Nettnin

Patched the right bank end of the lower log weir to seal it until the project is rebuilt in 2004. Channel was dry.

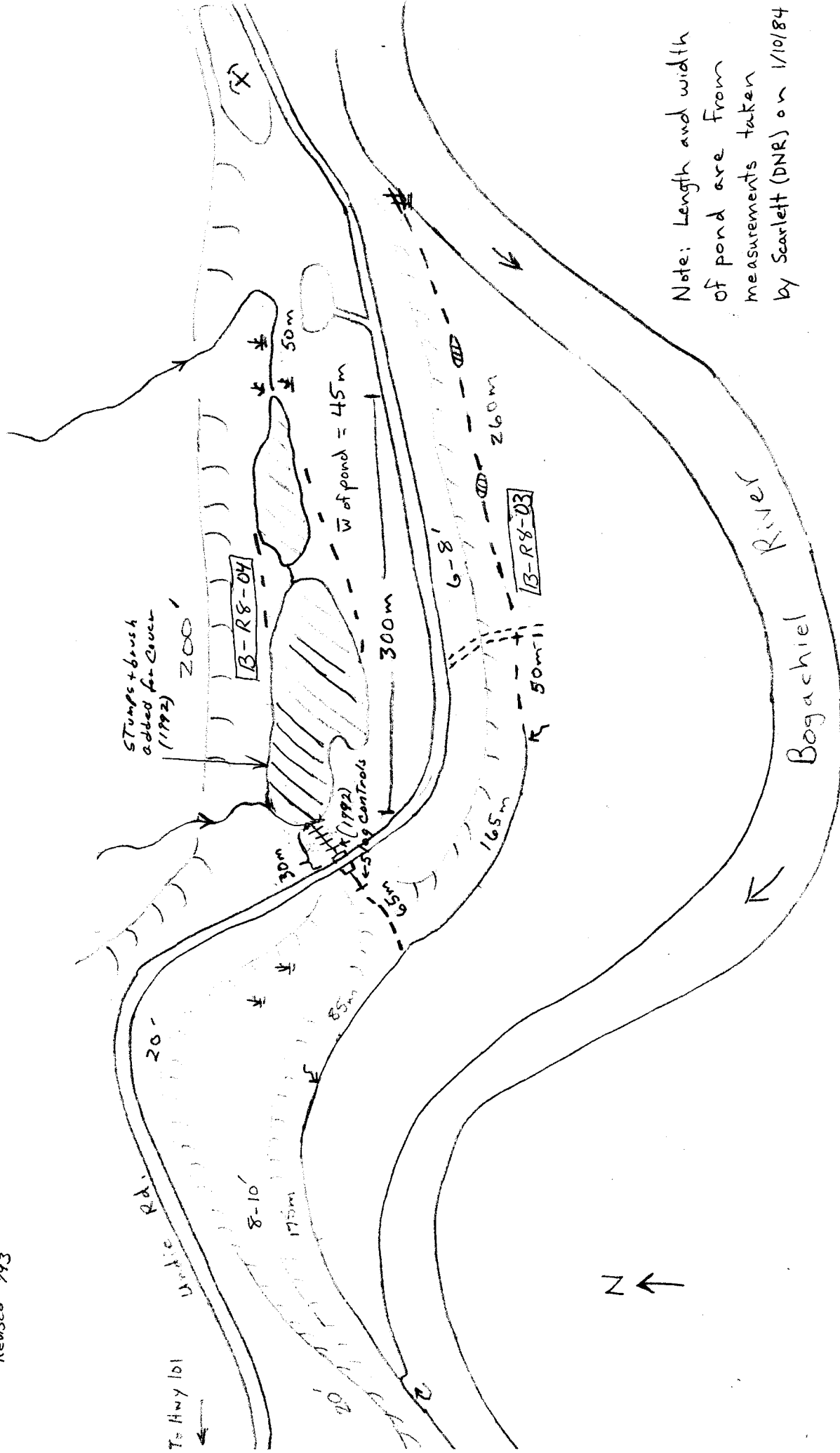
DATE: 10/30/03

OBSERVER: Nettnin

Active beaver dam at pond outlet. Log weirs look good at this time.

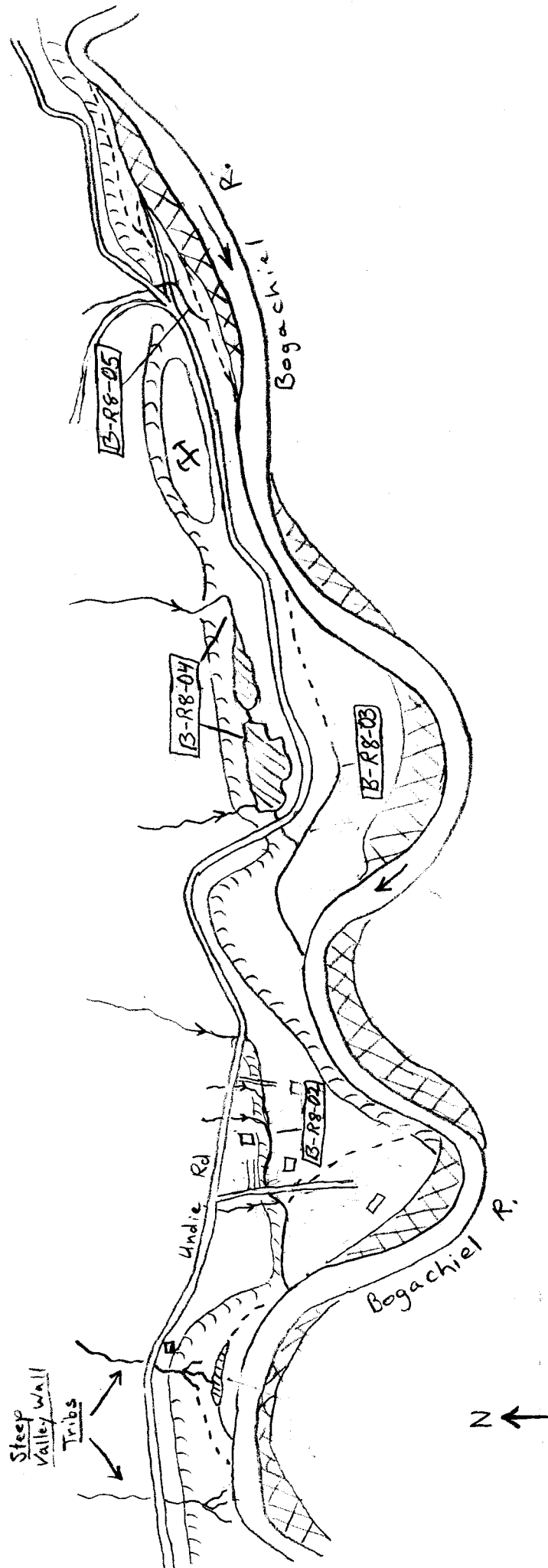
Bogachiel River
 AREA: B-R8
 SITE: B-R8-03 + B-R8-04
 TUCKER Pt Pond

Revised 1/93



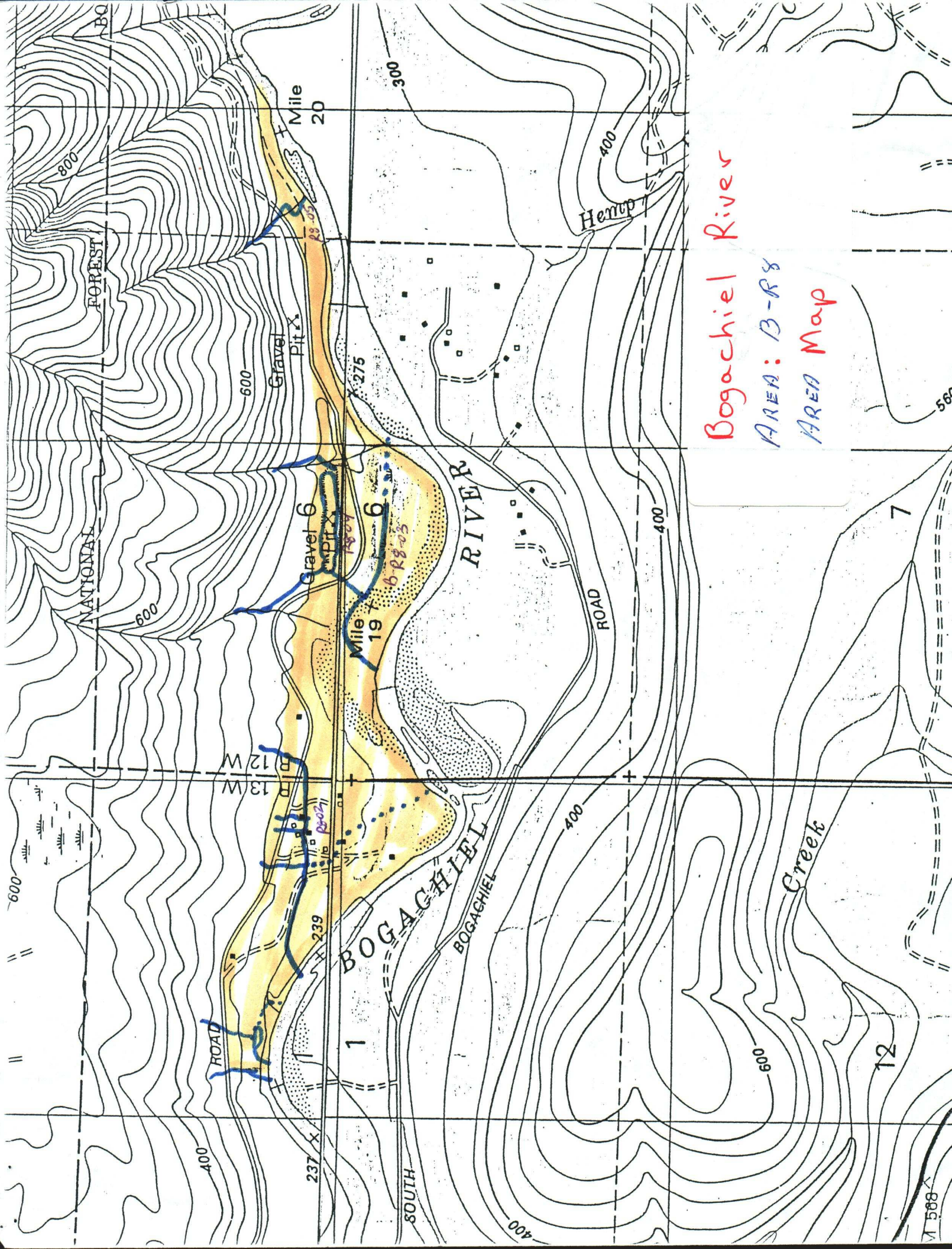
Note: Length and width of pond are from measurements taken by Scarlett (DNR) on 1/10/84

(8-3-89)



Bogachiel River
 AREA: B-R8
 Overview Map

Rev 5/90
 Eliminated B-R8-01



Bogachiel River

AREA: B-RS

AREA Map